

showing that the cause of this destruction must be the escape of gas from the pipes.

M. Ulex mentions several other localities where similar facts have occurred, so that there can no longer be any doubt as to the injurious influence of coal-gas upon vegetation. We must not, however, conclude from these circumstances that this is a necessary consequence of the introduction of gas-lights. In Leipzig for instance, the gas-pipes pass through the promenades without any appearance of injury to the trees. This arises from the junction of the pipes being much more carefully effected than at Hamburgh, so that escapes of gas are much more rare.

From these observations it follows, that it is as well to allow gas-pipes to pass as far as possible from plantations of trees, and that when this cannot be managed, great care must be taken to render the junctions of the tubes as perfect as possible.—*Journ. für prakt. Chemie*, lvi. p. 257.

*On the Habits of the Wigeon.* By MATTHEW MOGGRIDGE.

*To the Editors of the Annals of Natural History.*

The Willows, Swansea, Jan. 8, 1853.

GENTLEMEN,—Last summer a pair of wigeons were observed on the lower lake at Penllergare, long after their brethren had migrated. At last I saw them swimming about with five young ones, and watched them with a good pocket-glass for some time at the distance of about 100 yards. The keepers and some others saw them also, so that there is no doubt of the fact.

Your obedient servant,

MATTHEW MOGGRIDGE.

*On the Relations between the Oxygen consumed by the Spadix of Arum italicum and the Heat produced by it.* By M. GARREAU.

The observations of M. Garreau confirm the well-known facts of the augmentation of the heat of the spadix of *Arum italicum* at the moment of flowering, and with redoubled intensity at certain hours, during several consecutive days. As might be expected, the oxygen taken from the air to form carbonic acid gas, and the development of heat are correlative phænomena. M. Garreau has measured the oxygen consumed at different hours; the difference is considerable. Thus, an *Arum* on the 7th of June indicated an increase of heat of 4°·5 Fahr. at half-past three in the morning; about half-past six the temperature had risen to 16° Fahr. above that of the surrounding atmosphere, and then diminished again to half-past nine. During this period of six hours the spadix consumed say 341 volumes of oxygen, whilst in the ensuing eighteen hours it only consumed 184. The same phænomena took place during several days.

“It was interesting to ascertain,” says M. Garreau, “whether there existed any organic cause, by means of which the ready action of atmospheric air upon the spadix of this *Arum* could be explained. Microscopic examination shows, in fact, that it presents a much larger absorbing surface than could have been supposed, as the cells forming